

HPr in normal subjects, whereas L-DOPA (500 mg po) and CB-154 (2.5 mg po) decreased plasma HPr levels. Plasma HPr responses to TRH impaired in most of the patients with Sheehan's

syndrome. The treatment with CB-154 (2.5 mg po bid) was effective to reduce plasma HPr in a patient with Forbes-Albright syndrome.

Radioimmunoassay of Vasopressin in Human Plasma

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This report refers to a highly sensitive and specific radioimmunoassay for vasopressin.

Lysine-8-vasopressin is coupled to porcine gamma globulin by a carbodiimide reaction and the conjugate is injected into a guinea pig at three-weekly intervals. Synthetic lysine vasopressin is used for iodination. Gel filtration on Sephadex G-25 fine is used both to purify the iodinated vasopressin and to increase its specific radioactivity.

Duplicate volume of plasma, 10 ml each, is added to 200 mg of Florisil and thoroughly shaken for 10 min at room temperature. The Florisil is washed twice with 5 ml volumes of cold 0.2 N hydrochloric acid and the vasopressin is then eluted by mixing the Florisil with 10 ml of cold acid-acetone for 5 min. The eluate are then lyophilized and the residue redissolved 0.05 M phosphate buffer containing 0.1 gram of lysozyme in 100 ml (lysozyme diluent). Each tube in the standard curve contains 0.1 ml of vasopres-

sin antiserum, 0.1 ml of ^{131}I -LVP (3000–6000 cpm), and 0.6 ml of lysozyme diluent. After 1 hour of incubation at 25°C, the tubes are incubated for 72 hours at 4°C. Dextran-coated charcoal was used for the separation of bound and free vasopressin.

Ten pg of vasopressin is the smallest amount that can be detected with confidence in most assays. The antiserum does not distinguish arginine from lysine vasopressin, but oxytocin causes no displacement of ^{131}I -LVP from antiserum. The mean recovery was 50–70%. Intraassay variability was $\pm 5.0\%$. The plasma vasopressin levels are 0–3.5 pg/ml in normal subjects. In two patients smoked while hydrated a definite rise in vasopressin level was seen. Comparison of plasma AVP level with plasma osmolality shows a clear correlation.

The method should enable us to gain a more complete understanding of the part played by vasopressin in body fluid homeostasis.